

What is claimed is:

1. An electron beam lithography system comprising:
a transfer chamber;
a plurality of electron beam lithography chambers, each of which is connected
5 to the transfer chamber and includes a multicolumn portion; and
input and output loadlock chambers, each of which is connected to the
transfer chamber,

wherein the plurality of electron beam lithography chambers and the input and
output loadlock chambers are connected to the transfer chamber, forming a cluster,
10 and a plurality of wafers are respectively loaded into the plurality of electron
beam lithography chambers so as to drive the electron beam lithography chambers
at the same time.

2. The system of claim 1, wherein a pre-baking chamber and a
15 post-baking chamber are further connected to the transfer chamber.

3. The system of claim 1, wherein an alignment chamber including an
aligner is connected between the transfer chamber and the input loadlock chamber.

20 4. The system of claim 1, wherein a cooling chamber including a cooling
plate is connected between the transfer chamber and the output loadlock chamber.

5. The system of claim 1, wherein a transfer robot for transferring wafers
is installed in the transfer chamber.

25 6. The system of claim 1, wherein a bottom portion on which the transfer
chamber is installed is spaced a predetermined distance apart from a bottom portion
on which each of the lithography chambers is installed, to cut off noise generated by
the transfer chamber.

30 7. The system of claim 6, wherein the bottom portion on which each of the
lithography chambers is installed is an anti-vibrator.

8. The system of claim 1, wherein a flexible adaptor and a slot valve are installed between the transfer chamber and each of the lithography chambers.

9. The system of claim 8, wherein the flexible adaptor is formed of one of
5 rubber and stainless steel.

10. The system of claim 1 or 2, wherein the pressure in each of the transfer chamber, the loadlock chamber, the lithography chambers into which wafers are loaded, the pre-baking chamber, and the post-baking chamber is held in the range
10 from about 10^{-6} torr to 10^{-7} torr,

and wherein the pressure in the multicolonm portion in each of the lithography chambers is held in the range from about 10^{-10} torr to 10^{-11} torr.